

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An image sensor comprising:
a plurality of pixels formed in a semiconductor substrate, each pixel including a light sensitive element;
a micro-lens over each of said light sensitive elements; and
a raised ridge structure surrounding each of said micro-lenses, wherein said raised ridge structure has a triangular cross-section and at least partially supports said micro-lens.
2. (Original) The image sensor of Claim 1 wherein said raised ridge structure is circular.
3. (Currently Amended) The image sensor of Claim 1 wherein said raised ridge structure ~~has a triangular cross-section~~ confines said micro-lens.
4. (Original) The image sensor of Claim 1 wherein the micro-lenses are formed from polymethylmethacrylate (PMMA) or polyglycidylmethacrylate (PGMA).
5. (Currently Amended) The image sensor of Claim 1 wherein said raised ridge structure has a height ~~on the order of~~ about 0.2 microns.
6. (Original) The image sensor of Claim 1 wherein said raised ridge structure is formed from the same material that underlies said micro-lenses.
7. (Original) The image sensor of Claim 1 further including a color filter layer between said micro-lenses and said light sensitive elements.

8. (Currently Amended) A pixel of an image sensor comprising:
a light sensitive element formed in a semiconductor substrate;
a micro-lens over said light sensitive element; and
a raised ridge structure surrounding said micro-lens, wherein said raised ridge structure has a triangular cross-section and at least partially supports said micro-lens.
9. (Original) The pixel of Claim 8 wherein said raised ridge structure is circular.
10. (Currently Amended) The pixel of Claim 8 wherein said raised ridge structure ~~has a triangular cross-section~~ confines said micro-lens.
11. (Original) The pixel of Claim 8 wherein the micro-lens is formed from polymethylmethacrylate (PMMA) or polyglycidylmethacrylate (PGMA).
12. (Currently Amended) The pixel of Claim 8 wherein said raised ridge structure ~~has a height on the order of~~ about 0.2 microns.
13. (Original) The pixel of Claim 8 wherein said raised ridge structure is formed from the same material that underlies said micro-lenses.
14. (Original) The pixel of Claim 8 further including a color filter layer between said micro-lens and said light sensitive element.
15. (Currently Amended) A method of forming a pixel of an image sensor comprising:
forming a light sensitive element in a semiconductor substrate;
forming a top planarizing layer over said light sensitive element;

forming a raised ridge structure over said top planarizing layer, said raised ridge structure encompassing said light sensitive element; and
forming a microlens within the interior of said raised ridge structure and over said light sensitive element, wherein said raised ridge structure has a triangular cross-section and at least partially supports said micro-lens.

16. (Original) The method of Claim 15 wherein said raised ridge structure is formed in said top planarizing layer.

17. (Currently Amended) The method of Claim 15 wherein said raised ridge structure ~~has a triangular cross-section~~ confines said micro-lens.

18. (Original) The method of Claim 15 wherein said raised ridge structure is a closed shape.

19. (Original) The method of Claim 15 further including forming a color filter layer between said micro-lens and said light sensitive element.